

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001247**Date Inspected:** 16-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Lefeng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Mock-up**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item Description	WBS	Dwg No.	Status
1 10 % UT examination at the skin A Tower Mock-up 89 M The QA inspector performed final ultrasonic testing (UT) after ZPMC Quality Control at the junction of the skin A to the longitudinal stiffeners weld joints # 9 through 12 scanning from sides A and B. The QA inspector observed that the welds appeared to be in compliance with the contract documents. See TL_6027 generated on this date.			
2 10 % MT verification to the Skin A Tower Mock-up 89 M The QA inspector performed 10 % MT verifications to the cover passes from the partial penetration joints(PJP) at the junction of the skin A with the longitudinal stiffeners weld joints # 1 through 8 and 13 through 20. The QA inspector found that welds appeared to be in accordance with the contract documents.			
3 Skin E to doubler plate unqualified welders The QA inspector observed that 4 ZPMC welders using the shielded metal arc welding (SMAW) process were performing welding operations at the junction of the skin E to the doubler plate SA-215 weld joints # 1 thru 4. The QA Inspector requested the ZPMC identification cards (ID)from the welders. The QA inspector found that the 4 welders were performing welding operations on the horizontal (2G) position and they were holding identification cards for overhead(4G)position. The welders in question were: Feng Hua Jun ID # 066258; Wang Jian, ID # 067081; Zhang Wei, ID# 066413 and Li ZaiJun, ID # 037996. The QA inspector had a conversation with ZPMC representative Shen Xue Jun. The QA inspector asked to Mr. Shen if the QA inspector could see the 3G or 2G qualification for the welders in			

# WELDING INSPECTION REPORT

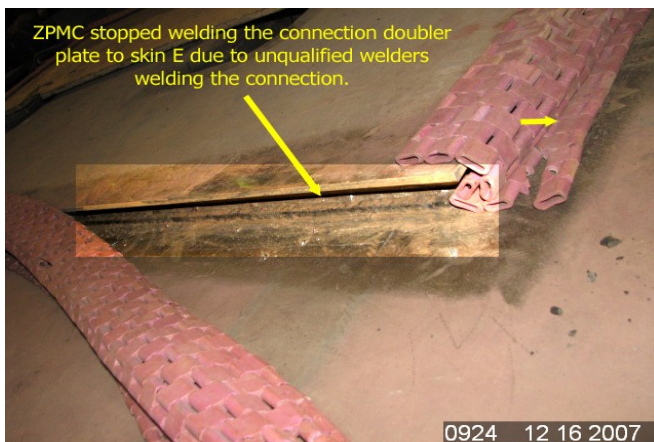
( Continued Page 2 of 3 )

question. ZPMC stopped welding. After looking in their records ZPMC said that the welders in question were not qualified in 2G position and that ZPMC would not allow them to weld in that position. Mr. Shen informed that the production supervisors want to proceed welding and they were asking for the QA inspector opinion. The QA inspector said that he could not give an opinion about this matter at this time. The QA inspector had a phone conversation with Task Leader Robert Cuellar. The QA inspector brought to the attention of Mr. Cuellar that ZPMC was using unqualified welders to weld the Skin E to the doubler plate. The welders used were approved to weld 4G and 1G position only. Mr. Cuellar said that an incident report needed to be issued to address this matter. The photographs below show the unqualified welders.

Note: The QA Inspector reviewed the revision # 7 for the approved ZPMC welder and welding operators qualification list and the QA Inspector found the above welders only qualified on SMAW on the 4G position.



SMAW Unqualified Welders: Feng Hua Jun weld #1, Wang Jian weld #2, Zhang Wei weld #3, Li Zai Jun weld #4 welding at the junction of the Skin E to the doubler plate SA-215 subassembly.



ZPMC stopped welding the connection doubler plate to skin E due to unqualified welders welding the connection.

## 4 Skin C TowerMock-up 89 M MT verifications

The QA inspector observed ZPMC QC representative Cai Xin Xin performing 100 % magnetic particle testing (MT) to the cover passes on the partial penetration joint (PJP) at the junction of the skin C and the longitudinal stiffeners weld joints # 5,6, 9,10,13 and 14. Mr. Cai Xin Xin found welds in compliance with the contract documents.

## Summary of Conversations:

As noted above.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Acuna,Alfredo	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

---